

APMIndependent Cost Review

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Comments (Preliminary)

- No Major issues Identified
- LBNF/DUNE Team was well prepared for the Cost Review
- Project has a solid cost estimating process in place
- Team was impressed by organization and level of detail of the Cost Book and associated BOEs at this stage (CD-1)
 - Some elements were considerably more mature than conceptual design
- Using independent AE estimate to reconcile several key project estimates is commendable and lends credibility



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Comments (cont'd)

- In general, CAMs consistently followed cost uncertainty guidelines, however there were several instances where documented contingency % exceeded the guidance. Suggest documenting deviations in BOE as appropriate.
- Risk-based contingency (~8%) along with contingency available for unknown unknowns appears low
- Cost range appears narrow based on project complexity and duration as well as dependency of international partners delivering on schedule

Recommendation (Preliminary)

Expand upper end of range to +30% vice current +20% (\$1,255M - \$1,862M)